

AMENDMENTS TO CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A mMethod of controlling the operation of an approach system of a ~~paper machine, a paper board machine or other~~ web formation apparatus, in which said method comprises the steps of:
 - a. forming a pulp from white water, fiber suspension and fillers,
 - b. feeding said pulp by a mixing pump into a gas separation tank,
 - c. separating gas from said pulp in the tank to produce reduced gas pulp,
 - d. feeding reduced gas pulp to into a head box of the production machine web formation apparatus, and
 - e. changing the feed of the reduced gas pulp to the head box as production changes in the web formation apparatus, and the change in the production of the web formation apparatus initiates a regulation system of the approach system, which regulation system essentially simultaneously checks a need for changing an operational mode of the mixing pump, initiates a change of the operational mode of the mixing pump according to said need, and both guides and regulates a head box feed pump.

2. (Currently Amended) A Method according to claim 1 wherein the regulation system ~~of the approach system~~ controls both a pressure of the head box and a surface level of the gas separation tank.

3. (Currently Amended) A Method according to claim 1 wherein an operating point of the feed pump and an operating point of the mixing pump are changed essentially simultaneously.

4. (Currently Amended) A Method according to claim 1 of controlling the operation of an approach system of a web formation apparatus, in which said method comprises:

- a. forming a pulp from white water, fiber suspension and fillers;
- b. feeding said pulp by a mixing pump into a gas separation tank;;
- c. separating gas from said pulp in the gas separation tank to yield reduced gas pulp;
- d. feeding the reduced gas pulp into a head box of the web formation apparatus, and
- e. changing the feed of the reduced gas pulp to the head box as production changes in the web formation apparatus, wherein the change in the production of the web formation apparatus initiates a regulation system of the approach system, which regulation system essentially simultaneously checks a need for changing an operational mode of the mixing pump, initiates a change of

the operational mode of the mixing pump according to said need, and both guides and regulates a head box feed pump,

wherein an operating point of the mixing pump is changed in anticipation of changing an operating point of the feed pump so that a surface level in the gas separation tank located between said pumps remains essentially constant or changes in a controlled manner.

5. (Currently Amended) A mMethod according to claim 1 wherein a change of head box pressure is readable from ~~the a~~ change of an operating point of ~~the a~~ head box feed pump, whereby said change of the operating point of the head box feed pump initiates a control function of the regulation system.

6. (Currently Amended) A Mmethod according to claim 2 wherein a surface level of the gas separation tank is controlled by arranging a control function of the regulation system initiated by a change of the head box pressure to initiate a control function of the regulation system.

7. (Currently Amended) A Mmethod according to claim 6 wherein the regulation system guides simultaneously the feed pump and the mixing pump so that a pressure in the head box remains constant, and a surface level in the gas separation tank remains constant or changes in a controlled manner.

8. (Currently Amended) A Mmethod according to claim 6 of controlling the operation of an approach system of a web formation apparatus, in which said method comprises:

- a. forming a pulp from white water, fiber suspension and fillers,
- b. feeding said pulp by a mixing pump into a gas separation tank,
- c. separating gas from said pulp in the gas separation tank to yield reduced gas pulp,
- d. feeding the reduced gas pulp into a head box of the web formation apparatus,
- e. changing the feed of the reduced gas pulp to the head box as production changes in the web formation apparatus, wherein the change in the production of the web formation apparatus initiates a regulation system of the approach system, which regulation system essentially simultaneously checks a need for changing an operational mode of the mixing pump, initiates a change of the operational mode of the mixing pump according to said need, and both guides and regulates a head box feed pump,
wherein the regulation system of the approach system controls both a pressure of the head box and a surface level of the gas separation tank,
wherein a surface level of the gas separation tank is controlled by arranging a change of the head box pressure to initiate a control function of the regulation system,
and
wherein the regulation system controls the mixing pump anticipatorily in relation to the feed pump so that the head box pressure and the surface level in the gas separation tank remain constant.

9. (Currently Amended) A Method according to claim 1 wherein the regulation system changes at least an output of the head box feed pump to keep a pressure in the head box constant, and a surface level variation in the gas separation tank is monitored simultaneously and measurements are taken to ~~correct~~ control the surface level of pulp in the gas separation tank.

10. (Currently Amended) A method according to claim 1 wherein a pulp surface level is allowed to change slowly and temporarily in the gas separation tank temporarily without changing the feed of the gas separation tank.

11. (Currently Amended) A Method according to claim 1 wherein when a pressure of the head box changes slowly, and the change of the pressure is compensated for only by changing a capacity of the head box feed pump, whereby a pulp surface level of the gas separation tank is allowed to change.

12. (Currently Amended) A Method according to claim 1 wherein when a pressure of the head box changes fast, the change of the pressure is compensated for by changing essentially simultaneously a capacity of the head box feed pump and a capacity of the mixing pump.

13. (Currently Amended) A Method according to claim 1 of controlling the operation of an approach system of a web formation apparatus, in which said method comprises:

- a. forming a pulp from white water, fiber suspension and fillers,
- b. feeding said pulp by a mixing pump into a gas separation tank,

c. separating gas from said pulp in the gas separation tank to yield reduced gas pulp,

d. feeding the reduced gas pulp into a head box of the web formation apparatus.

e. changing the feed of the reduced gas pulp to the head box as production changes in the web formation apparatus, wherein the change in the production of the web formation apparatus initiates a regulation system of the approach system, which regulation system essentially simultaneously checks a need for changing an operational mode of the mixing pump, initiates a change of the operational mode of the mixing pump according to said need, and both guides and regulates a head box feed pump,

wherein in a grade change situation, a capacity of the mixing pump and a capacity of the feed pump are changed in a stepwise manner.

14. (Currently Amended) A method according to claim 2 of controlling the operation of an approach system of a web formation apparatus, in which said method comprises:

a. forming a pulp from white water, fiber suspension and fillers,

b. feeding said pulp by a mixing pump into a gas separation tank,

c. separating gas from said pulp in the gas separation tank to yield reduced gas pulp,

d. feeding the reduced gas pulp into a head box of the web formation apparatus.

e. changing the feed of the reduced gas pulp to the head box as production changes in the web formation apparatus, wherein the change in the production of the web formation apparatus initiates a regulation system of the approach system, which regulation system essentially simultaneously checks a need for changing an operational mode of the mixing pump, initiates a change of the operational mode of the mixing pump according to said need, and both guides and regulates a head box feed pump,

wherein the regulation system of the approach system controls both a pressure of the head box and a surface level of the gas separation tank and

wherein said surface level regulation is controlled by means of fuzzy logic.

15. (New) A method as in claim 1 wherein the web formation apparatus is a paper formation machine or a paper board formation machine.

16. (New) A method as in claim 1 wherein said mixing pump is upstream in a flow of the pulp from the gas separation tank, and the head box feed pump is downstream of the tank and upstream of the head box in a flow of the reduced gas pulp.

17. (New) A method as in claim 1 wherein the feed of the reduced gas pulp is a feed rate of the reduced gas pulp.

18. (New) A method to provide and regulate pulp flowing through an approach system to a web formation apparatus comprising:

a. forming the pulp from white water, fiber suspension and fillers,
b. feeding the pulp by a mixing pump into a gas separation tank,
c. separating gas from the pulp in the tank to produce reduced gas pulp,
d. feeding reduced gas pulp from the tank, through a head box feed pump and to a head box of the web formation apparatus,
e. changing a production operational mode of the head box, and
f. in anticipation of the change in the production operational mode, a regulation system for the approach system determines a change to an operational pump mode of the mixing pump and implements the change in the operational pump mode by coordinated adjustments of an operation point of the mixing pump and an operating point of the head box feed pump.

19. (New) A method as in claim 18 wherein the regulation system adjusts a pulp feed output of the head box feed pump to maintain a constant pulp pressure at the head box constant.

20. (New) A method as in claim 18 wherein the regulation system varies a surface level in the gas separation tank by adjusting the operating points of the mixing pump and the head box feed pump.

21. (New) A method as in claim 20 wherein the surface level in the gas separation tank is temporarily changed to without changing a feed rate to the head box.